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2021 NISSAN Ariya Service and Repair Manual

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When normally completed , code "0" is displayed.

• "Suspension" or "Abnormally completed": Select "Completion", perform the following services.

Displayed item		Possible cause	Service procedure
Abnormally completed	1 2 3	Internal processing error	 Check self-diagnosis result. If DTC is detected, perform trouble diagnosis. Turn the power switch OFF → ON, then position the target appropriately again and perform camera aiming. If abnormally completed even after aiming again, replace front camera unit.
	4	Front camera unit malfunction	 If front camera unit is already replaced, perform C/U configuration again. Turn the power switch OFF → ON, then accurately position the target again and perform camera aiming. If abnormally completed even after aiming again, replace front camera unit.
	5	Internal process time out	 Turn the power switch OFF → ON, then accurately position the target and perform camera aiming again. If abnormally completed even after aiming again, replace front camera unit.
	6	Power switch is not turned yet OFF \rightarrow ON after replacing front camera unit.	Turn the power switch OFF \rightarrow ON, then position the target appropriately again and perform camera aiming.
	7	Writing value malfunction	 If front camera unit is already replaced, perform configuration. Position the target appropriately again. Then perform the aiming again. If abnormally completed even after performing above procedure, replace front camera unit.
	8	Position of front camera unit is not correct.	Accurately position front camera unit.Accurately position the target again, and perform camera aiming.
	9	Camera aiming input value is invalid.Input value is not correct during camera aiming.	Correct the camera aiming input value and perform camera aiming again.
	16	Other error	 Check self-diagnosis result. If DTC is detected, perform trouble diagnosis. Turn the power switch OFF → ON, then position the target appropriately again and perform camera aiming.

Displayed item		Possible cause	Service procedure		
			 If abnormally completed even after aiming again, replace front camera unit. 		
	18	 Front camera unit cannot detect target Target is not positioned Position of front camera unit is not correct. Inappropriate work environment. Inappropriate vehicle condition Input value is not correct during camera aiming. Roll angle is outside the threshold. Position of front camera unit is not correct. Inappropriate work environment. Inappropriate vehicle condition 	 Appropriately position the front camera unit. Appropriately position the target again and perform camera aiming. 		
	20	Front camera unit cannot detect the target.	 Perform front camera unit C/U configuration. Check target setting information. Position the target appropriately again. Then perform the aiming again. 		
	21	Parameter read error	 Perform front camera unit C/U configuration. Check target setting information and perform camera aiming. 		
	22 23	"Dt" input value error "Ts" input value error	Check target setting information and perform camera aiming.		
	24	 Yow angle is outside the threshold. Position of target is not correct. Position of front camera unit is not correct. Inappropriate work environment. Inappropriate vehicle condition. 	 Appropriately position the front camera unit. Appropriately position the target again and perform camera aiming. 		

Displayed item		Possible cause	Service procedure		
		 Input value is not correct during camera aiming. 			
		Pitch angle is outside the threshold.Position of target is not correct.			
		 Position of front camera unit is not correct. 			
	25	 Inappropriate work environment. 			
		 Inappropriate vehicle condition. 			
		 Input value is not correct during camera aiming. 			
		Detect several targets.			
		 Position of target is not correct. 			
		 Position of front camera unit is not correct. 			
	26	 Inappropriate work environment. 			
		 Inappropriate vehicle condition. 			
		 Input value is not correct during camera aiming. 			
	27	Aiming error	Perform camera aiming again		
	28	Front camera unit cannot detect the left target	Appropriately position the target again and perform		
	30	Front camera unit cannot detect the right target	camera aiming.		
	31	Aiming error	Perform camera aiming again		
	255	No aiming done	Turn the power switch OFF \rightarrow ON, then position the target appropriately again and perform camera aiming.		

WNOTE:

Replace front camera unit if "00H Routine not activated" or "10H Writing error" are repeatedly indicated during the above two services are performed.

7. Confirm that "Normally completed" is displayed and then select "End" to close the adjustment procedure.

>>

<u>GO TO 3</u>.

3. PERFORM SELF-DIAGNOSIS

Perform self-diagnosis of "LANE CAMERA" with CONSULT.

Is any DTC detected?

YES>>

Perform diagnosis on the detected DTC and repair or replace the applicable item. Refer to <u>DTC Index</u>.

NO>>

<u>GO TO 4</u>.

4. ACTION TEST

Perform the following system operation by action test.

- LDW: Refer to <u>Work Procedure</u>.
- I-LI: Refer to <u>Work Procedure</u>.
- I-BSI: Refer to Work Procedure.
- TSR: Refer to <u>Work Procedure</u>.

>>

WORK END

If system detects that driver is not facing forward even though driver is facing forward, perform face recognition check.

1. PREPARATION BEFORE FACE RECOGNITION CHECK

Make sure that all of the following conditions are satisfied

- Vehicle speed is 0 km/h (stopped).
- Shift position is "P" range.
- Put driver's head on the headrest.
- Adjust seat so that eye position is the same as the inner rear end of assist grip.
- Adjust steering position to the lowest position and the farthest position from driver.

CAUTION:

- It is necessary for another person to check the position of driver's eyes from the passenger side.
- If the eye position is different from the specified position, face recognition cannot be performed correctly.



SIEMD-7330683-03-000399785

1	Assist grip	2	Head rest	

>>

<u>GO TO 2.</u>

2. PERFORM FACE RECOGNITION CHECK

With CONSULT

1. Power switch is ON.

2. Select "Work Support" in "Driver Monitor Camera".

3. Select "FACIAL RECOGNITION CHECK".

- 4. Touch "Start".
- 5. Check the note displayed on CONSULT and touch "Next".
- 6. Follow CONSULT screen to check face recognition.

CAUTION:

- Do not turn driver's face for 10 to 15 seconds approximately until the result is displayed.
- Observe the following precautions while working.
 - Keep head on the headrest without moving seat position.
 - Do not wear sunglasses or masks.
 - Do not wear a hat or muffler that hides face.
 - Do not scratch face (do not hide eyes, nose, mouth).
 - Do not intentionally change facial expression (squinting, smiling, etc.).
 - Do not turn face any direction without instruction.

NOTE:

• Face recognition check is performed as following order;

Front of the vehicle $A \rightarrow \text{Right front pillar} B \rightarrow \text{Navigation screen} C \rightarrow \text{Front of the vehicle} A \rightarrow \text{Right door mirror} D \rightarrow \text{Left door mirror} E$



• Perform twice only in front of the vehicle.

7. Confirm each check result.

When the result is "NG" and the precaution is surely followed, touch "Next."
 When the result is "NG" and the precaution is not followed, touch "Retry."

>>

<u>GO TO 3.</u>

3. SAVE RESULT

With CONSULT

1. After completing all the work, touch "Screen Capture" to save the screen.

2. After saving the screen, touch "Save" to save the log information.

>>

WORK END

- "Tire diameter correction" is a function to input the correction value to the around view monitor control unit when the tire outer diameter is changed.
- When the following work is performed, in order to operate the system normally, use the work support "Tire diameter correction" of CONSULT and input the tire outer diameter correction value to the around view monitor ,control unit.
 - When changing from summer tires to snow tires.
 - When changing from snow tires to summer tires.
 - When changing the tire size

NOTE:

It is not necessary to correct the tire diameter when the tire wear.

1. PERFORM SELF-DIAGNOSIS OF AROUND VIEW MONITOR CONTROL UNIT

CONSULT

- 1. Perform "All DTC Reading" with CONSULT
- 2. Check if any DTC is detected in "Self Diagnostic Result" of "AVM".

Is any DTC detected?

YES>>

Perform the trouble diagnosis for the detected DTC. Refer to DTC Index.

NO>>

<u>GO TO 2.</u>

2. Tire diameter correction value input

CONSULT

- 1. Power switch ON.
- 2. Select "Tire diameter correction" on "Work Support" of "AVM" using CONSULT.
- 3. Select the tire type after replacement according to the indication of CONSULT.
- 4. Select the tire size after replacement according to the indication of CONSULT.
- 5. Touch "OK".
- 6. Check the "Completed" is displayed in "Status".

>>

<u>GO TO 3.</u>

3. Parking position confirmation

Perform ProPILOT Park system operation inspection and check that the system operates normally.

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Work Procedure

Always perform the radar alignment after removing and installing or replacing the distance sensor.

Application Notice

Туре	Description
TYPE 1	When using KV99112700 for radar alignment. Refer to Description.
TYPE 2	When using 1-20-2851-1 for radar alignment. Refer to Description.

TYPE 1

Description

OUTLINE OF RADAR ALIGNMENT PROCEDURE

- A 4-wheel vehicle alignment must be performed before proceeding with radar alignment procedure.
- Always perform the radar alignment after removing and installing or replacing the distance sensor.

WARNING:

Radio waves could adversely affect electric medical equipment. Those who use a pacemaker should contact the electric medical equipment manufacturer for the possible influences before use.

CAUTION:

The system does not operate normally unless the radar alignment is performed. Always perform it.

- 1. Set the target board (SST: KV99112700) to the correct position in front of the vehicle.
- 2. Set the radar alignment mode ("MILLIWAVE RADAR ADJUST" on "Work support") with CONSULT, and then perform the adjustment according to the display. (Distance sensor automatically adjusts.)

CAUTIONARY POINT FOR RADAR ALIGNMENT PROCEDURE

CAUTION:

- For radar alignment procedure, choose a level location with a few meter of working space in front and surrounding the vehicle.
- Vehicle must be stationary and unoccupied during the whole alignment procedure.
- Any slight vibration during the alignment procedure can cause the test to fail. If this happens, you will have to restart the alignment process.
- The power switch must be in the ON position.
- The battery voltage must not fall below 12 volts during the whole alignment procedure. Failure to maintain adequate battery voltage will cause the test to fail. If this happens, you will have to restart the alignment process.
- The target board must be set in front of the vehicle facing the sensor.
- Adjust the radar alignment with CONSULT. (The radar alignment procedure cannot be adjusted without CONSULT.)
- Never enter the vehicle during radar alignment.
- Never block the area between the radar and the target board at any time during the alignment process.
- Accurate steering wheel setting is crucial. Once set, do not disturb the steering wheel for the remainder of the alignment procedure.